



# Measure the SEL Advantage Over Draw-Out Meters

There is a popular misconception that draw-out meters save time and money. This document describes common myths and facts about draw-out meters and provides a cost-analysis tool that demonstrates why SEL meters provide a superior solution.

## Myths and Facts

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**Myth:** Installing draw-out meters saves time and money when replacing and testing meters.

**Fact:** The SEL-735 Power Quality and Revenue Meter is about \$1,300 less expensive than a draw-out meter and is at least three times more reliable. The design and manufacturing processes of SEL meters limit accuracy drift and eliminate the need for yearly calibration verification, thus saving several hours per meter per year.

The draw-out switchboard case shown in Figure 1 is an unnecessary \$800 option because the SEL-735 includes built-in terminal blocks for I/O and an auxiliary power supply, as shown in Figure 2.



Figure 1 Typical draw-out meter—installer must add external terminal blocks/connectors

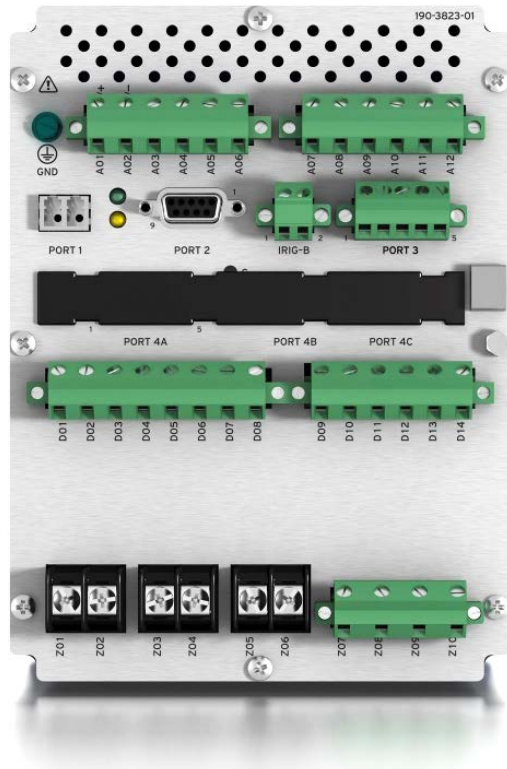


Figure 2 SEL-735 with built-in terminals

**Myth:** The time savings of replacing a draw-out meter provides a lower total cost of ownership compared to an SEL meter.

**Fact:** SEL estimates that the overall lifetime cost of the SEL-735 Meter is \$1,339 less than that of a draw-out meter. Use your own data in the Cost Analysis Tool to estimate your individual cost savings.

**Myth:** Meters must be swapped out yearly as part of the accuracy verification process. This is simply easier to do with the draw-out meter interface.

**Fact:** When removing a meter from service, there are many steps to complete. It is necessary to read the load profile data, save settings, swap the meters, load settings into the new meter, test the new meter, and finally, verify the SCADA and MV-90® communications function. This process can take up to an hour. Swapping meters is unnecessary with SEL meters. On-site testing using a test block and portable test station reduces meter downtime and technician site time. Instead of an hour, your accuracy verification procedure could take only 15 to 20 minutes. In addition, the high-accuracy SEL meters eliminate the need for yearly calibration verification.

## Cost Analysis Tool

Refer to the following table for an example total cost of ownership analysis.

| Assumptions                                      |   |                  |
|--|---|------------------|
| Labor Cost                                       | \$60/hour   |                  |
| SEL-735 Mean Time Between Failure (MTBF) (years) | 300   |                  |
| Draw-Out MTBF (years)                            | 100   |                  |
| Lifetime Replacement Cost                        | $(\text{Replacement Cost} \cdot \text{Life}) / \text{MTBF}$ |                  |
| Product Life (years)                             | 10  |                  |
| Installation Cost                                | Draw-Out Meter  | SEL-735 Meter    |
| Purchase Price                                   | \$2,800   | \$1,500          |
| CT/PT Wiring                                     | \$30  | \$30             |
| I/O Wiring                                       | \$60  | \$30             |
| <b>Total Installation Cost</b>                   | <b>\$2,890</b>  | <b>\$1,560</b>   |
| Replacement Cost                                 | Draw-Out Meter  | SEL-735 Meter    |
| Travel To and From Site                          | \$120   | \$120            |
| Replace Existing Meter                           | \$0   | \$30             |
| Program/Test                                     | \$30  | \$30             |
| Total Replacement Cost                           | \$150   | \$180            |
| <b>Lifetime Replacement Cost</b>                 | <b>\$15</b>   | <b>\$6</b>       |
| Lifetime Cost                                    | Draw-Out Meter  | SEL-735 Meter    |
| Installation                                     | \$2,890   | \$1,560          |
| Replacement                                      | \$15  | \$6              |
| <b>Total Lifetime Cost</b>                       | <b>\$2,905</b>  | <b>\$1,566</b>   |
| <b>1 SEL-735 Meter—Savings</b>                   |   | <b>\$1,339</b>   |
| <b>300 SEL-735 Meters—Savings</b>                |   | <b>\$401,700</b> |

## Conclusion

Save time and money, and help debunk the myths of draw-out meters. The advantages of SEL meters are clear. Switch out old draw-out meters for SEL meters, and upgrade to not only a less expensive, more reliable, more accurate, and more convenient metering solution, but also a new, easier way of meeting your metering needs.